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L3: Entry 20 of 25

File: EPAB

Oct 10, 1991

PUB-NO: DE003583987A1

DOCUMENT-IDENTIFIER: DE 3583987 A1

TITLE: TITLE DATA NOT AVAILABLE

PUBN-DATE: October 10, 1991

APPL-NO: DE03583987

APPL-DATE: October 31, 1985

PRIORITY-DATA: DE03583987A (October 31, 1985)

INT-CL (IPC): A61K 37/02; C07K 7/10; C12P 21/02

ABSTRACT:

A new antibiotic, designated epidermin (I), has the prim. structure: *Staphylococcus epidermidis* DSM 3095, which is resistant to (I), is new. (I) is made by aerobic cultivation of DSM 3095 at 34-37 deg.C on a complex nutrient soln. contg. 2-4% N source (e.g meat extract), 1-3% sugar or sugar alcohol; 0.25-1% alkaline earth carbonate and/or 0.25-0.5% alkaline earth hydroxide. The cells and inorganic salts are removed, then (I) isolated by (a) extracting with butanol at pH 8, evaporating the extract, dissolving the residue in MeOH and pptn. of lipids with ether or (b) adsorbing onto acrylic ester or polystyrene polymers, eluting with 99:1 MeOH-concn. H₂SO₄, neutralising with NH₃ and evaporating in vacuo. The isolate is then chromatographed on 'Sephadex LH-20' (RTM) to remove low mol.wt. peptides amino acid and salts, and subjected to liq-liq partitioning first in 3:1:3 n-butanol/ethyl acetate/0.1N acetic acid ((I) remaining at the starting position) and then in the neutral system 1:1 2-butanol/0.05N NH₄ acetate. Purified (I) is recovered as a colourless powder by freeze-drying.

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L3: Entry 24 of 25

File: DWPI

Jun 10, 1997

DERWENT-ACC-NO: 1990-016158

DERWENT-WEEK: 199944

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TITLE: Isolating epidermin from staphylococcus epidermidis culture - by adsorption on styrene! based copolymer, elution and chromatography on cation exchanger, useful as antibiotic for treating skin infections

INVENTOR: FIEDLER, H; HOERNER, T ; JUNG, G ; KELLNER, R ; WERNER, R ; ZAEHNER, H ;
FIEDLER, H P ; HORNER, T ; KELLNER, J R ; WERNER, R G ; ZAHNER, H

PATENT-ASSIGNEE:

| ASSIGNEE | CODE |
|------------------|------|
| THOMAE GMBH KARL | THOM |

PRIORITY-DATA: 1988US-0219698 (July 15, 1988)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|---------------|--------------------|----------|-------|------------|
| KR 9709289 B1 | June 10, 1997 | | 000 | C07K001/14 |
| EP 350810 A | January 17, 1990 | G | 018 | |
| AU 8938103 A | January 18, 1990 | | 000 | |
| PT 91171 A | February 8, 1990 | | 000 | |
| DK 8903506 A | January 16, 1990 | | 000 | |
| JP 02084194 A | March 26, 1990 | | 000 | |
| ZA 8905362 A | March 27, 1991 | | 000 | |
| EP 350810 B1 | September 29, 1993 | G | 021 | C07K001/14 |
| DE 58905744 G | November 4, 1993 | | 000 | C07K001/14 |
| ES 2059645 T3 | November 16, 1994 | | 000 | C07K001/14 |
| IE 62402 B | January 25, 1995 | | 000 | C07K001/14 |
| CA 1336896 C | September 5, 1995 | | 000 | C12P021/02 |
| JP 2777205 B2 | July 16, 1998 | | 012 | C12P021/02 |

DESIGNATED-STATES: AT BE CH DE ES FR GB GR IT LI LU NL SE AT BE CH DE ES FR GB GR IT LI LU NL SE

CITED-DOCUMENTS:1.Jnl.Ref; A3...9139 ; EP 181578 ; EP 27710 ; No-SR.Pub

APPLICATION-DATA:

| PUB-NO | APPL-DATE | APPL-NO | DESCRIPTOR |
|--------------|---------------|----------------|----------------|
| KR 9709289B1 | July 15, 1989 | 1989KR-0010095 | |
| EP 350810A | July 7, 1989 | 1989EP-0112446 | |
| JP02084194A | July 14, 1989 | 1989JP-0182372 | |
| ZA 8905362A | July 14, 1989 | 1989ZA-0005362 | |
| EP 350810B1 | July 7, 1989 | 1989EP-0112446 | |
| DE58905744G | July 7, 1989 | 1989DE-0505744 | |
| DE58905744G | July 7, 1989 | 1989EP-0112446 | |
| DE58905744G | | EP 350810 | Based on |
| ES 2059645T3 | July 7, 1989 | 1989EP-0112446 | |
| ES 2059645T3 | | EP 350810 | Based on |
| IE 62402B | July 14, 1989 | 1989IE-0002283 | |
| CA 1336896C | July 14, 1989 | 1989CA-0605673 | |
| JP 2777205B2 | July 14, 1989 | 1989JP-0182372 | |
| JP 2777205B2 | | JP 2084194 | Previous Publ. |

INT-CL (IPC): A61K 0/00; C07G 11/00; C07K 1/14; C07K 3/12; C07K 7/10; C07K 15/04; C07K 17/10;
C12N 11/08; C12P 1/04; C12P 21/02; C12R 1/45; C12P 21/02; C12R 1/45; C12P 21/02; C12R 1/45

ABSTRACTED-PUB-NO: EP 350810A

BASIC-ABSTRACT:

the polypeptide antibiotic epidermin (I) is isolated and purified from a culture of a *Staphylococcus epidermidis* strain by (a) applying the culture broth or filtrate to a styrene-divinyl copolymer (A), (2) eluting active ingredients with MeOH-dil HCl, (3) adjusting eluate to pH 5.3-5.8; (4) applying to a weak cation exchanger (B) (5) washing-out non-bound cpds. with pH7 buffer, (6) eluting (I) with pH 6-8 buffer contg. and MeOH, (7) readsorbing (I) onto (A) washing the resin with water (desalting) and eluting with MeOH-MeCOOH mitd., (8) evaporating or freeze-drying the eluate, and opt. (9) further pruifying by h.p.l.c.

The *S. epidermidis* strains used are pref. DSM 3095 or NC18 11536.

USE/ADVANTAGE - (I) is known for treatment of skin infections such as eczema, impetigo, cellulitis and acne. This method is simple and produces significantly higher yields of (I) then known processes.

ABSTRACTED-PUB-NO:

EP 350810B

EQUIVALENT-ABSTRACTS:

Process for isolating epidermin from a culture broth or a culture filtrate of a strain of *Staphylococcus epidermidis* and for purifying this substrate, characterised in that (a) the culture filtrate or culture broth is added to a styrene-divinyl copolymer, (b) the active component is released from the resin by

elution with methanol/diluted hydrochloric acid, (c) the eluate is adjusted to a pH of 5.3 to 5.8, (d) the eluate is placed on a weak cation exchanger, (e) non-bound substances are subsequently washed out with a buffer solution at pH 7, (f) the active component is eluted out of the cation exchanger with a solution consisting of buffer substance, sodium chloride and methanol at pH 6.0 to 8.0 and for purification washed with water in order to remove salts and the epidermin is released from the resin with a methanol/acetic acid mixture and the solution is evaporated or freeze-dried, whilst the epidermin thus obtained may subsequently also be subjected to high performance liquid chromatography for extra purification.

CHOSEN-DRAWING: Dwg.0/10 Dwg.0/10

TITLE-TERMS: ISOLATE STAPHYLOCOCCUS CULTURE ADSORB POLYSTYRENE BASED COPOLYMER ELUTION CHROMATOGRAPHY CATION EXCHANGE USEFUL ANTIBIOTIC TREAT SKIN INFECT

DERWENT-CLASS: A96 B04 D16

CPI-CODES: A04-B10; A04-C04; A12-M03; A12-V; A12-W1L; B02-E; B11-B; B11-C08D2; B12-A07; D05-C02;

CHEMICAL-CODES:

Chemical Indexing M1 *01*

Fragmentation Code

H1 H100 H101 H181 H182 H4 H401 H481 H8 J0
J011 J012 J1 J171 J172 K0 L2 L250 M280 M311
M312 M313 M314 M315 M321 M331 M332 M333 M340 M342
M343 M349 M381 M391 M421 M510 M520 M530 M540 M620
M720 M903 N131 N161 Q233 V050 V901 V913 V923

Ring Index

63917

Registry Numbers

1327U 0502U

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0231 0306 3162 0418 1123 2020 2569 3264 3272 2769

Multipunch Codes: 014 034 04- 055 056 074 075 077 128 231 27& 473 53& 532 533
54& 623 624 642 645 720

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1990-006930

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Search Results -

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| epidermidis same (protein\$ or polypeptide\$ or peptide\$) same (isolat\$4 or purif\$4) | 25 |

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Derwent World Patents Index

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polypeptide\$ or peptide\$) same (isolat\$4
or purif\$4)

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| USPT,PGPB,JPAB,EPAB,DWPI | epidermidis same (protein\$ or polypeptide\$ or peptide\$) same (isolat\$4 or purif\$4) | 25 | <u>L3</u> |
| USPT,PGPB,JPAB,EPAB,DWPI | epidermidis same (protein\$ or polypeptide\$ or peptide\$) same fibrinogen | 1 | <u>L2</u> |
| USPT,PGPB,JPAB,EPAB,DWPI | epidermidis same (protein\$ or polypeptide\$ or peptide\$) | 148 | <u>L1</u> |